RESUMÉ OF THE PROCEEDINGS AT
A CONFERENCE ON

POLIOMYELITIS

(INFANTILE PARALYSIS)

ORGANIZED BY
THE SCHOOLS DEPARTMENT
HOLMWOODS & BACK & MANSON LTD.

HELD IN
LONDON, ON 28TH FEBRUARY, 1939

With the Clerk's Compliments.

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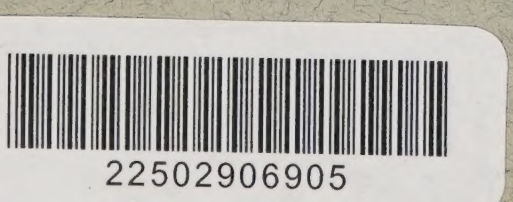
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INFANTILE PARALYSIS IN SCHOOLS.

The outbreak of Infantile Paralysis which occurred at the end of last year was greatly in excess of the normal and brought out the difficulties of treatment from the medical as well as the school points of view.

As a result, we arranged a conference at which the whole matter of the relations between schools and parents was discussed.

We think you may be interested to read a brief account of the proceedings at this conference and we are accordingly sending you the enclosed brochure.

No doubt you will discuss this with your Medical Officer, and if you would like to have any further copies, we shall be happy to supply them.

Yours faithfully,

A. W. G. Dewar

Manager,
Schools Department,
HOLMWOODS & BACK & MANSON.LTD.

The Chairman of the Conference was Dr. W. Russell Brain, F.R.C.P.

Invitations to attend the Conference were accepted by :—

Uppingham School	J. F. Wolfenden, Esq., M.A.	Headmaster.
	Major G. Frampton	Bursar.
Wellington College, Berks	R. P. Longden, Esq., M.A.	Headmaster.
	Dr. J. Lambert, O.B.E.	Medical Officer and Pres. of Med. Off. of Schools Association.
Shrewsbury School, Shrewsbury	Denys Woods, Esq.	Bursar.
Oundle School, Northampton	G. S. Rees, Esq.	Bursar.
Felsted School, Essex	The Rev. K. J. F. Bickersteth, M.C., M.A.	Headmaster.
	Dr. G. O. Barber	Medical Officer.
	R. P. Moller, Esq.	Bursar.
Bishop's Stortford School, Herts	H. L. Price, Esq., M.A.	Headmaster.
	Dr. R. P. Gammie	Medical Officer.
	B. J. Adams, Esq.	Bursar.
Headington School, Oxford	Miss M. Moller, M.A.	Headmistress.
	Miss Pelloe	Bursar.
The New Beacon, Sevenoaks	Major F. K. Norman, M.C.	Headmaster.
Allied Schools Ltd.	K. H. Adams, Esq.	Secretary.
Rev. P. C. Underhill, M.A.		Secretary of the I.A.P.S.
S. Maxwell, Esq., M.B., LL.B., F.R.A.S.		V.P. Independent Schools Assocn. and Secretary of College of Preceptors.
Major The Hon. B. M. S. Foljambe, M.C.		Hon. Sec. Public Schools Bursars' Association.
Professor S. P. Bedson, F.R.S.		Professor of Bacteriology, The London Hospital.
Dr. W. Russell Brain		Physician to the London Hospital and Medical Referee to Lloyd's Underwriters, Harley St.
Dr. J. A. Glover, O.B.E.		Sen. Med. Off. of Board of Education.
Neville B. Manson, Esq.		Holmwoods & Back & Manson Ltd.,
A. W. G. Dewar, Esq.		Schools Department.

As set out in the notice sent out to those attending the Conference, the points suggested for discussion were as follows :—

1. The Conference will first consider the mode of spread of the infection, so far as this is known, and the significance in this connection of carriers, abortive cases, frankly paralytic cases and convalescents.

2. In the light of these facts it will discuss what measures should be taken (*a*) in the interest of those immediately exposed to infection and (*b*) in the interests of public health.

3. It will consider whether it is practicable to formulate any standard procedure which could be applied in an outbreak of the disease in (*a*) Public Schools and (*b*) Private and Preparatory Schools, and (*c*) if the school is to be carried on how the usual mode of life should be modified and (*d*) the liability of the school in respect of parents who voluntarily or compulsorily remove pupils because of an outbreak, and what, if any, return of fees should be made in these circumstances.

It is fully appreciated that the Conference had no authority to impose its decisions or recommendations upon schools, but in view of its representative character, it is believed that the large majority of schools will be glad to hear of the decisions or recommendations which have been reached.

THE CHAIRMAN called upon Professor Bedson, F.R.S. (London Hospital), the well-known authority on virus diseases to deal with the clinical aspects of Infantile Paralysis.

PROFESSOR BEDSON said that the causal agent would not multiply in any but nerve cells ; it was highly neurotropic. He stated that available evidence supported the view that in the vast majority of cases infection was transmitted by infective droplets and not by food. The portal of entry of infection appeared to be the naso-pharynx and of those who became infected only a very small minority developed frank clinical disease. Out of several hundred infected perhaps only one or two would develop frank poliomyelitis, a few would present mild but atypical symptoms, whereas the majority would remain in apparent good health. The last group—cases of inapparent infection—carried the virus in the naso-pharynx and broadcast it in their environment. It followed from this that carriers—mild atypical and inapparent infections—played a most important role in the spread of the disease.

Since only the rare infected individual developed poliomyelitis it would seem that by the time cases of the disease had appeared in a community, infection would be widespread. It was not known why some infected individuals developed frank poliomyelitis whereas the majority escaped, but it was known that young children were most susceptible and it appeared that with increasing age there was an increased resistance to the development of clinical disease.

Should poliomyelitis have occurred in a school then it would be reasonable to assume, on the evidence available, that infection with the virus of poliomyelitis was already widespread in the school or at any rate in the smaller community—the house—in which the case or cases had occurred. This being so it would be illogical to close the school and send the boys home since such action would be of no advantage to the boys and it would entail dispersing carriers to a large number of new, though smaller, communities, many of which might contain younger children who, if infected, would be more likely to develop the disease. Looking at the problem in as broad a way as possible it appeared that the sound policy was not to close a school if poliomyelitis broke out, whatever the severity of the epidemic, in fact the severer the epidemic the greater would be the reason for not closing a school and sending the boys home. It was recognised that one could not oblige parents to leave a child at school, but if they decided to take their child home enquiries ought to be made as to whether there were younger children in the family and if so the parents should be strongly advised not to take their child away.

Question. How long does it take after infection for the disease to declare itself?

PROFESSOR BEDSON. The incubation period is round about ten days.

Question. Assuming a case or two cases occurred in a school or community, you would assume that the infection would already be wide-spread ten days before the case is diagnosed?

PROFESSOR BEDSON. Yes, the clinical case is not necessarily at the beginning of the outbreak.

Question. They would probably be infected ten days before?

PROFESSOR BEDSON. Yes.

Question. It is not any good sending the boys home as they probably have already been infected?

PROFESSOR BEDSON. Yes, and you are taking the infected boys home to a clean community where they may spread the infection.

THE CHAIRMAN. I think that is a very important point, because I can quite foresee that we are going to reach this question as to whether there is a conflict between the boys infected and the public generally. There was a view expressed by Dr. Collier a few years ago. Dr. Collier maintained that the overt cases were the results of what he called a carrier epidemic. There had been wide infection through the school, and few cases had occurred and the majority of susceptible boys, by the time any infection was evident, had already been infected. If that is the position, one might say there is very little risk in boys remaining there. On the other hand there is the view, that just as in measles, a single case is a source of infection potentially for a very large number of those exposed to it. I would like Professor Bedson to comment on that.

PROFESSOR BEDSON. I think Dr. Collier's view is substantially correct. From the available evidence I should think that it is highly likely that by the time a case appears in the community you have widespread infection.

THE CHAIRMAN. I think perhaps it would be most helpful now if we had a general discussion, and we should like to hear anybody express their views or ask questions on the points already raised before we come down to actual concrete matters with regard to practical measures. We should particularly like to hear a School Medical Officer as to the spread of the infection.

A general discussion then followed.

DR. LAMBERT, Medical Officer of Wellington and President of the Medical Officers of Schools Association, gave a very full account of the outbreaks of Infantile Paralysis which he had dealt with, including the outbreak at Wellington last Winter. He emphasised the difficulty of advising parents as to leaving the boys at school or taking them away. He stated that the publication issued by the Medical Officers of Schools Association says that on the occurrence of one or more cases in the school a notification should be sent to all parents. We do not advocate school closure as a whole. If, however, the removal of boys in these circumstances is requested, the responsibility should be directly on the parents, and the removal should be associated with individual isolation of the boy removed, especially from young children ; notification to the local Medical Officer of Health by the School Authorities, and notification to the family doctor by the parent. It was in 1934 we issued that. That was our definite opinion and still remains to my knowledge the opinion of the Medical Officers of Schools Association. The dispersal of the school is not warranted on the occurrence of one or two cases.

DR. J. A. GLOVER. Perhaps I might illustrate Professor Bedson's observations with some experience I have had with a disease, which spreads in the same way that poliomyelitis probably does, by carriers. You always find I think with regard to healthy carriers in the case of cerebro-spinal fever that if you are observing the carrier rate, it gives you warning before the " case epidemic " begins. At Caterham Guards Depot in 1917 there were some 5,000 people, and they had a sharp outbreak of cerebro-spinal fever, and it is no exaggeration to say that at one time when the carrier rate was over 75 per cent., there were perhaps 3,000 or 4,000 carriers in the depot. As Professor Bedson has pointed out, it is likely that under such circumstances dispersal does not save people who are going to be attacked. It is too late. With one case there may be a slight possibility, but with a second case there is no likelihood of saving many people from being infected. The infection is already there. It is certain that there will be a very large number of carriers in the community ; and, moreover, the difficulty of finding out in which of the homes that you are sending your boys to can isolation be effective or in which there are young children is a very practical difficulty. I think there is very little in dispersion to be gained by the boy, and a good deal to be lost by the family.

DR. R. P. GAMMIE (Bishop's Stortford) then gave the experiences he had had at the College, stressing the effect of the outbreak on the parents and the boys and quoted the views of Mr. Price the Headmaster.

Following a remark to the effect that if a large number of parents take their boys away, it has the effect of disorganising the school to such an extent that it is equivalent to a closure, Drs. Gammie and Lambert commented upon the psychological effect of an outbreak on both parents and boys which caused the former to take their boys away and the latter to write home in such a state of panic that it caused the parents to withdraw them.

MR. R. P. MOLLER (Felsted) and MISS M. MOLLER (Headington School) quoted their experiences.

The Medical Authorities present agreed that if there is an outbreak of Infantile Paralysis in the district in which a school is situated prior to the opening of a school term, the school in that district should postpone opening until the period of quarantine has passed.

DR. GLOVER referred to recent work which showed the greater susceptibility to the virus after tonsillectomy and said that an operation for tonsils or adenoids should not be performed if poliomyelitis was prevalent in the district.

DR. RUSSELL BRAIN (Chairman) summed up the clinical side as follows :—The position is that we know of the spread of virus by " droplet " infection, and the most important point is that, of those infected, only a fraction of one per cent. in most epidemics manifest paralysis. It follows, therefore, that when one, or simultaneously more than one, paralytic case has occurred in a school there has already been widespread clinical or abortive infection in the school population : probably nearly every individual has been exposed to the risk of infection. The chances are therefore that it is unlikely that more cases will occur, or at any rate many more, as the result of exposure to those already affected or carriers after that stage. For that reason it seems to be the best plan, and the safest plan, even in the interests of those exposed, to keep them at school rather than send them home, although one recognises the psychological stress both upon the boys and upon the parents, and that is advocated by the Medical Officers of Schools Association. The wise thing is to isolate a boarding house within the school and isolate the day boys from the boarders. Whereas parents have complete freedom to take children home in these circumstances, it does not seem to be a course which can be recommended on strictly medical grounds. Could we now hear from the lay school authorities how that commends itself to them? We are ultimately coming to the issue of liability and something which concerns the schools and the parents and the Insurance Companies which must be based upon reasonable considerations, and not upon emotional reactions.

Many speakers contributed to the discussion which followed on the question of whether or not the school would return fees to parents who withdrew their children, and the unanimous opinion was that no return of fees should be made. It was the opinion of the Conference that this question should be dealt with in the general rules set out at the beginning of any outbreak so that all parents would understand that in the event of the removal of a child they would be responsible for the fees, at any rate so far as the quarantine period of three weeks is concerned.

MAJOR G. FRAMPTON (Uppingham). We had one case early in the term, and although it was not a regulation that they should take their boys away, nor that we should stand in the way, out of 407 only 12 went, and there were no further cases, and at the end of three weeks 11 came back. One had been removed to an area where poliomyelitis was in existence and we refused to have him back. The question of fees came up. The parents took the boys away against our advice. The parents have the option of a fees insurance scheme, and if they do not adopt that, that is their look-out, and we also take the line that they had no right to

remove the boy in the first place, and it still came under the conditions of the fees insurance scheme. We do not know what would have happened if a second case had occurred.

On the question as to whether there is a greater susceptibility in children of younger ages, say 8-14, it was agreed—Dr. Lambert demurring—that there was little or no variation in children of school age.

It was also agreed that a letter should always be sent out to the parents on the occurrence of a case of Infantile Paralysis, which should convey that if parents prefer their children to leave the school then they remove them at their own risk. Reference was made to the letter sent out by Dr. Barber of Felsted which was regarded as admirable and Dr. Lambert thought that this matter might be dealt with by the Medical Officers of Schools Association.

SUMMARY.

1. The period of incubation is approximately 10 days and the period of infectivity not more than 21 days on an average.
2. By the time a case appears and is definitely recognised there has been widespread infection through the school or a community in which the original case has occurred.
3. The consensus of medical opinion was that except under abnormal circumstances, the school should not be closed on the outbreak of the disease.
4. That, as suggested in the handbook of the Medical Officers of Schools Association, on the occurrence of one or more cases in the school a notification to all parents should be sent.
5. If the removal of pupils is requested by the parents, the responsibility should be directly on them.
6. It was generally agreed by the School Officials present that parents should be responsible for the payment of the fees if they withdrew their children and that no remission should be allowed by the school.

WARREN
WINCHESTER